

**Surveying for rare amphibians, rare reptiles, and vernal pools, in
Robinson State Park, Massachusetts**

Final Report
31 January 2008

Submitted by:

Dr. Paul R. Sievert
U.S. Geological Survey
Massachusetts Cooperative Fish & Wildlife Research Unit
University of Massachusetts Amherst
Amherst, MA 01003
Phone: 413-545-4888
E-mail: psievert@nrc.umass.edu

BACKGROUND

Robinson State Park in Agawam, Massachusetts, was established in 1934. It extends for about 5 miles along the Westfield River and consists of over 900 acres, including a 17 acre island in the Westfield River. The park is adjacent to an urban/developed area and has extensive trails, roads, and picnic areas. Nevertheless, two state rare species of reptiles have been reported in the park (only one species has been formally entered into the Natural Heritage & Endangered Species Program database) and an additional two rare amphibians and a rare reptile occur within two miles of the park. These records lead to a reasonable likelihood of identifying additional rare species records and habitat, including breeding pools, in the Park. The topographic map of the area, and the Department of Environmental Protection Wetlands data layer, show the presence of a several wetlands, including wooded swamps, shrub swamp, marshes, a small pond, small streams, and the riparian area along the Westfield River, and the river itself. In addition, the park supports oak forest communities that provide upland habitat for turtles, with open sandy areas for nesting.

OBJECTIVE

To conduct a biological resources survey of Robinson State Park focused on rare reptiles and amphibians, and their habitats, including vernal pools.

RESULTS

Eastern Box Turtle

Robinson State Park (RSP) was visited on three occasions to survey for eastern box turtles (*Terrapene c. carolina*) (State Species of Special Concern) [Michael T. Jones (MTJ), and Lisabeth L. Willey (LLW): 30 April 2007, LLW: 20 and 21 Sept 2007]. During each visit, different areas of the park were surveyed so that all Timber Sale Areas were surveyed at least once. Approximately 2 hours were spent in each Timber Sale Area, and the remainder of the park was evaluated for potential habitat.

Good box turtle habitat was found throughout the park. As we have observed in other areas of the Connecticut River Valley, box turtles likely avoid the areas of the park with dense conifer canopy, particularly monocultures of pines (*Pinus* species) or hemlock (*Tsuga canadensis*). Most deciduous and mixed forest sites in the park appear suitable, particularly ones with abundant leaf litter, early successional forest and nesting habitat, and near emergent wetlands. Areas with lower amounts of human activity likely support higher densities of box turtles due to a lower risk of collection. Overall, RSP provides enough suitable habitat for nesting, over-wintering, and foraging to support a breeding population of box turtles. Given the number of individuals found per search hour, this site may contain densities comparable to sites in the Connecticut River Valley where box turtles are known to successfully breed.

Tressle Pavilion Area

This area appears to contain good box turtle habitat, with abundant leaf litter and an adequate shrub layer. Upland forested areas are in close proximity to forested wetlands and open areas. One adult box turtle was observed by Karen Searcy in this area during a vegetation survey on 18 June 2007.

Fire Access Road Area

This area contains good box turtle habitat, including forested wetland areas adjacent to upland deciduous and mixed forests, with abundant leaf litter and adequate understory. In addition, the site is near open right-of-ways suitable for nesting. Two adults were found in this section (Figure 1 & 2). The NHESP database contains an observation from 4 June 2004 immediately south of this area. Given our low survey effort, the observation of two turtles may indicate the presence of a substantial population in this section of RSP.

Swiss Club Development Area

This area appears suitable for box turtles, and although no turtles were found, it is nearby an area where two adults were observed.

Main Entrance Area

Portions of this area are composed primarily of conifers, and are unlikely to support high densities of box turtles. Mixed and deciduous forest sections potentially contain box turtles, but this is uncertain here due to the heavy use of this part of the park.

James Street Area

This section consists of good box turtle habitat with deep leaf litter, predominantly deciduous canopy, and adequate understory and woody debris, however no turtles were observed during surveys.

James Street Extension

The sandy field adjacent to deciduous forest portions of this area appears to provide good box turtle nesting habitat, and thus the surrounding forest is likely to support box turtles. Portions of this area are also dominated by conifer in the canopy and probably represent less desirable areas, but areas with mixed and hardwood forest appear to be good habitat. The NHESP database contains an observation of two box turtles within this area on 17 Sept 2006.

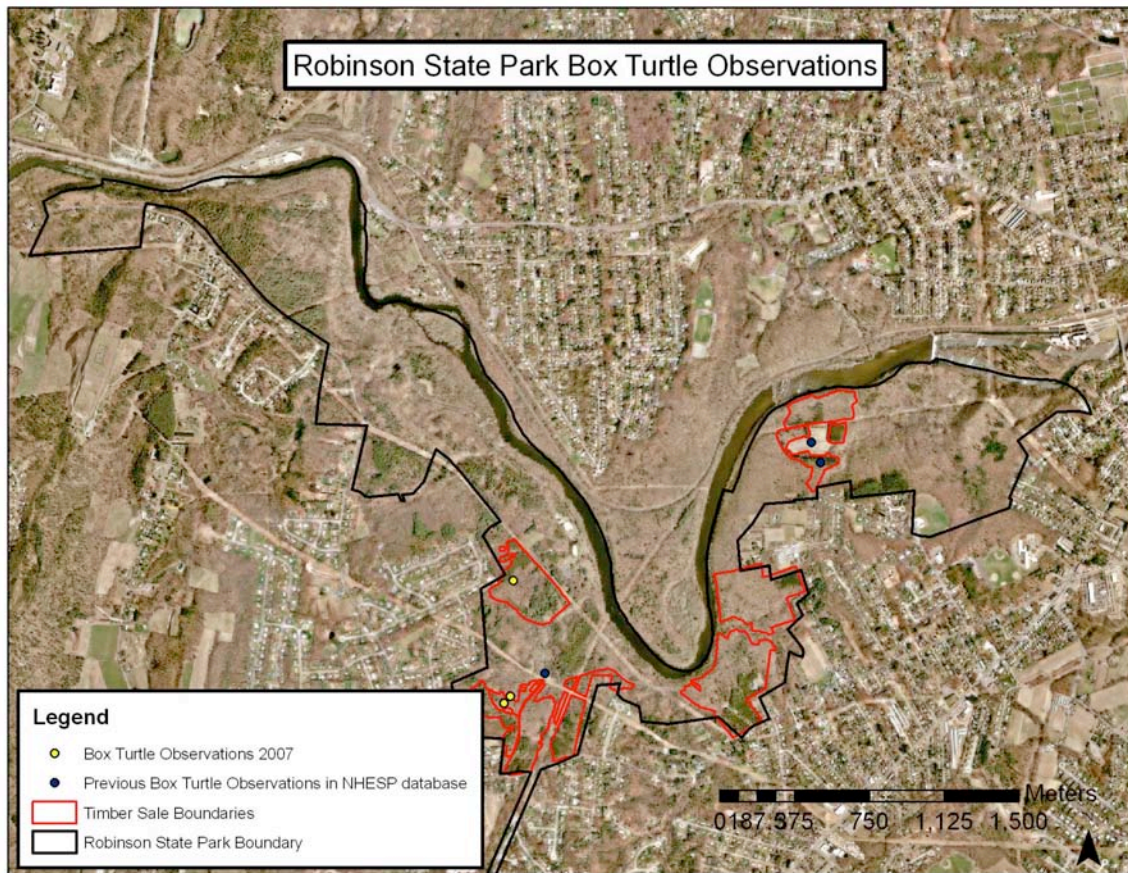
Figure 1. Eastern box turtle: Female # 136, Robinson State Park, 20 Sept 2007.



Figure 2. Eastern box turtle: Male # 138, Robinson State Park, 21 Sept 2007.



Figure 3. Observations of eastern box turtles in Robinson State Park, this study 2007.

Table 1. Eastern box turtles (*Terrapene c. carolina*) observed at Robinson State Park in 2007.

Date	Sex	Ernst (1974) Notch Code	Lat.	Long.	Age	Straight Carapace Length (mm)	Carapace Width (mm)	Wt (g)	Deformities and injuries
20-Sep-07	F	136	42.08281	-72.67325	> 20	131.4	113.8	512	Missing toes on both front feet 13 marginals on both sides, 3rd and 4th vertebral split, chipped 10th right marginal
21-Sep-07	M	138	42.08314	-72.67289	worn	149.0	111.7	556	

Wood Turtle

On 30 April 2007, MTJ and LLW surveyed the Westfield River along the border of RSP for wood turtles. The Westfield River appeared to be suitable habitat for wood turtles, but none were observed during the survey.

Potential threats to turtles at Robinson State Park

Collection

Due to the high volume of pedestrian traffic throughout Robinson State Park, incidental collection may be a significant concern at this site.

On 30 April 2007, MTJ and LLW observed children collecting large numbers of toads in a bucket from a pond in RSP. Similar collection efforts for box turtles could prove detrimental to the population.

Mowing

The right of ways, fields, and other open sections of the park could be a threat if mowed during the active turtle season. The period of greatest concern is nesting in June, although wood turtles and box turtles are both known to use fields and scrubby areas from May through September. Grassy areas, maintained as lawns, may provide suitable nesting areas for box turtles and these sites may put the animals at lower risk since they would not stay long, since cover is not available, and people doing the mowing are more likely to see the turtles. Herbaceous or shrubby areas that are allowed to grow, but subsequently cut, are a greater risk to box turtles since they often occupy such sites, particularly in June and July, and are thus susceptible to mortality by mowing.

Road Mortality

Several roads in the park bisect suitable habitat, but is not likely to be a large source of mortality.

Four-toed Salamanders

This section written by P. Swain, NHESP, from information provided in the Rare Animal Observation Form submitted to NHESP by Paul Sievert, the NHESP Four-toed Salamander fact sheet, NHESP staff biologist Lori Erb, and the Robinson State Park natural community report materials from Karen Searcy.

On April 24, 2007, Four-toed salamanders (*Hemidactylium scutatum*) (State Species of Special Concern) were located in a wetland at the northwest end of the park during surveys for vernal pools and Four-toed Salamander habitat. *Note: The species has been recommended for delisting in 2008. As of the writing of this report, it remains a MESA listed species.* Observers were Dr. Paul R. Sievert, Dr. Alan Richmond, Bradley W. Compton, and Kimberly Ogden. Three females Four-toed Salamanders were observed: two were guarding eggs at separate nests, and the third appeared to be carrying eggs. The habitat is a permanent marsh about 50 m across. It is mostly less than 0.25m deep with a

muck bottom, sphagnum edges, with non-persistent emergent vegetation dominant. There was a small patch of cattails. Fish were present, and the water appears to be permanent, either of which keeps the wetland from being considered a certifiable vernal pool in Massachusetts. The fish are unusual for Four-toed habitat. The site at RSP where the Four-toeds were found is in the northern part of a shrub swamp also sampled by the plant and natural community inventory (site ROB9, called a Shrub Swamp). The ecological study recorded the presence of hummocks, some with sphagnum, in their plot at the southern end of wetland, but noted that the hummocks were not overhanging the water.

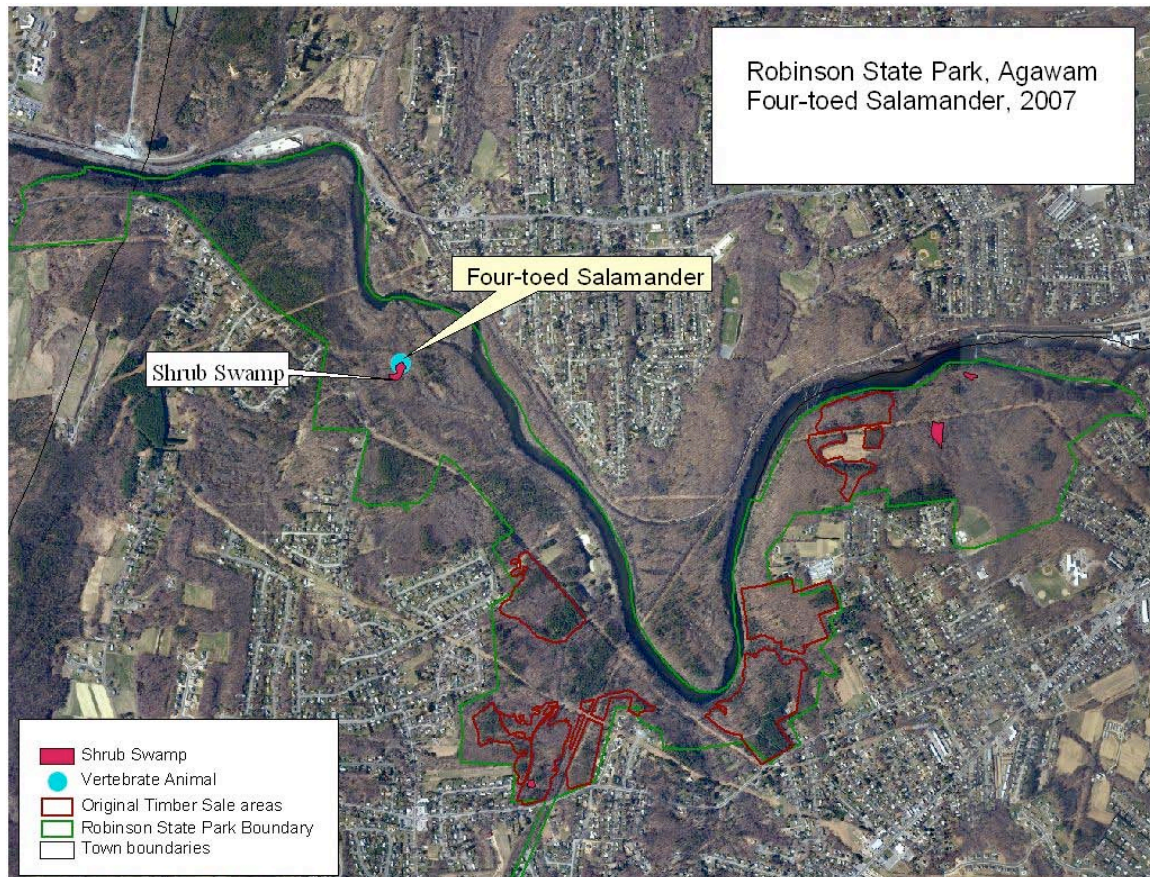


Figure 4. Four-toed Salamander location, 2007, Robins State Park.

Adult Four-toed Salamanders live in forested habitats surrounding swamps, bogs, marshes, vernal pools, and other (normally) fish-free aquatic sites that are used as breeding sites. Adults are infrequently encountered outside of the spring nesting period. They overwinter in forested habitat in holes, channels and other crevices in the ground. Distribution is limited to areas that provide both breeding and upland habitats in close proximity.

Nests are made in wetland hummocks of grasses, sedges or wet moss (usually sphagnum moss) overhanging slow moving streams or pools of standing water. Larvae are typically found in small pools and slow moving streams associated with appropriate nesting areas.

Figure 5a, 5b. and 5c. Four-toed salamander, egg mass, and site.

Fig. 5a. Adult female four-toed salamander



Fig. 5b. Four-toed nest with eggs.



Fig. 5c. Wetland containing 3 adult female four-toed salamanders and 2 nests.



No Four-toed Salamanders were found in the other wetlands or vernal pools examined at RSP in 2007. The Park has many wetlands with hummocks and hollows, although few obvious Sphagnum hummocks overhanging water were reported (the community field form has an overt question about sphagnum hummocks, but it is restricted to sites visible from the vegetation plot). This leaves open the question of the size of a population at RSP – clearly present and reproducing as reported. RSP provides widespread apparently suitable adult and larval habitat for foraging, and over-wintering. However, suitable nesting substrate – sphagnum hummocks abutting pools of water deep enough for larval survival – may be limited, even within relatively large wetlands. Four-toed-salamanders are difficult to inventory and the species is generally considered to be under surveyed. Potential threats at Robinson State Park

Trails near the nesting area: Increased miles of trails used by off road vehicles where litter is compressed or disappears would cause problems for movement of the adults

which need the moisture of loose and decaying leaf and branch litter found on the forest floor. Amphibians in general do better in shade than opening, sunny areas.

Management

The greatest threat to the four-toed salamander is habitat destruction resulting from road construction, development, and timber harvesting that results in intense sun on the forest floor in and around boggy wetlands, peatlands, and forested wetlands. Protection of both the breeding habitat and adjacent non-breeding, mature forest habitat is necessary to maintain populations of the species. Even if *Hemidactylium scutatum* is delisted later in 2008, protection of this site, and its surroundings, where reproduction is known would benefit the species. No management activities are known to be proposed for this area.

Vernal Pools

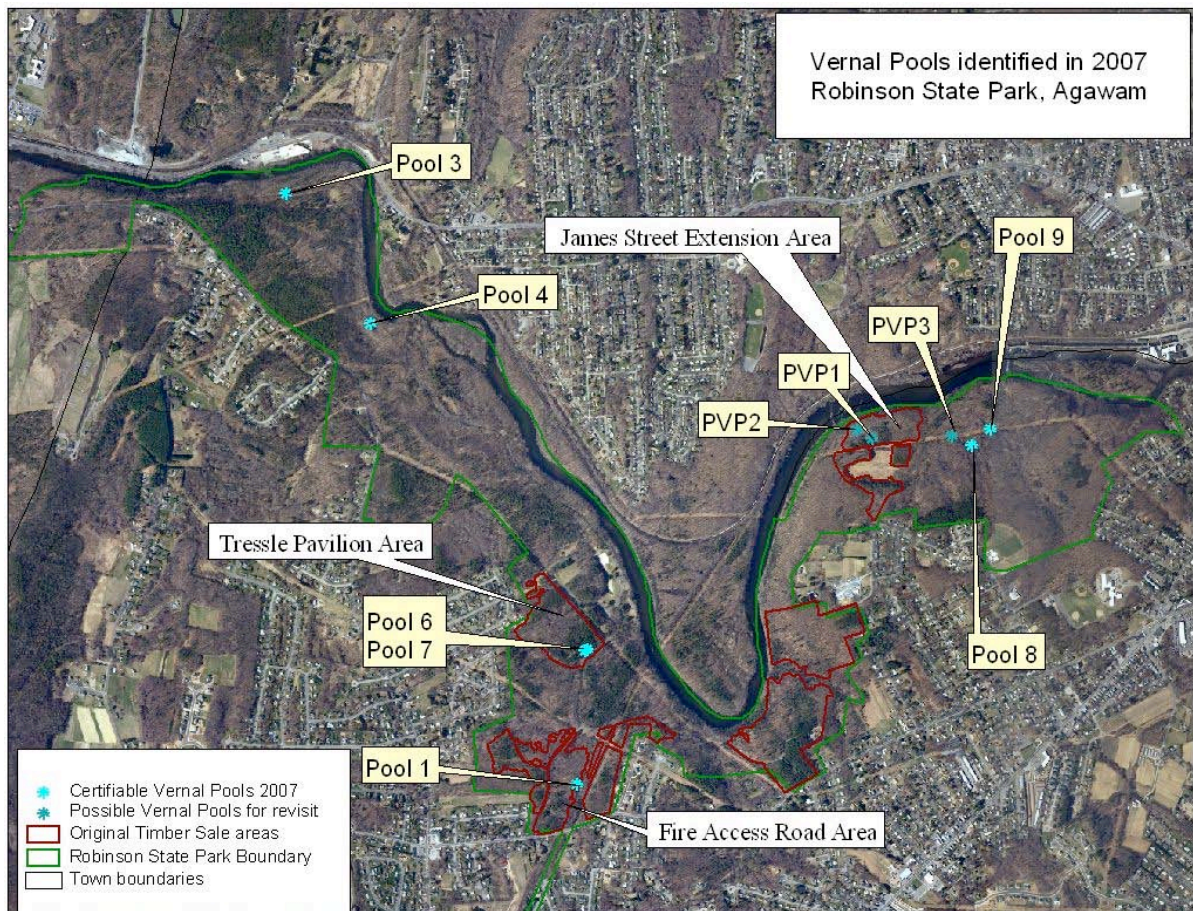


Figure 6. Vernal pools located in 2007 at Robinson State Park.

Management and Habitat Recommendations

We recommend not harvesting in areas that have been certified as vernal pools. In addition, as more pools are identified, they should be afforded the same protection from human disturbance.

Pools to be certified: dates visited

24 April 2007 (Paul Sievert, Alan Richmond, Brad Compton, and Kim Ogden)

6 August 2007 (David Paulson)

1 October 2007 (David Paulson and Al Richmond)

9 October 2007 (David Paulson)

30 October 2007 (David Paulson, Ray Webber, Pat Swain)

Pool 1

N 42.08162

W 072.67085 GPS Format: hddd.ddddd

Comments: Long narrow pool along fire road (63' x 258')

Spring peepers, green frogs, spotted salamander egg mass (2), wood frog egg mass (TNTC)



Figure 7. Dry pool.



Figure 8. Spotted salamander egg mass.

Pool 3

N 42.10550

W 072.68722 GPS Format: hddd.ddddd

Comments: By “pavilion/stone building”, north of the natural gas line. Large shallow pool, probably less than ½ m deep. 80% coverage by red maple canopy, trees 6-18” dbh 62+ wood frog egg masses (85' x 450')



Figure 9. Dry pool.



Figure 10. Wood frog egg mass.

Pool 4

N 42.10044

W 072.68243 GPS Format: hddd.ddddd

Comments: Small pool along side of road in park. (66' x 260')

5 wood frog egg masses



Figure 11. Dry pool.



Figure 12. Wood Frog Egg Mass

Pool 6

N 42.08711

W 072.67046 GPS Format: hddd.ddddd

Comments: Ray Webber called this the Trestle pool. This pool is about 50 feet off the park road, has an electric line running through basin, 60-70 wood frog egg masses, no spotted salamander seen (44' x 140').



Figure 13. Dry pool.



Figure 14. Wood frog egg mass.

Pool 7

N 42.08707

W 072.67033 GPS Format: hddd.ddddd

Comments: this pool is behind "pool 6", Ray Webber called this "Trestle pool 2", 20 wood frog egg masses (72' x 64')



Figure 15. Dry pool

Pool 8

N 42.09564

W 072.64941

155' x 200'

Comments: tussock sedge marsh at east end of park

6-spring peepers calling, 50+ wood frog egg masses, painted turtle, 2 mallards



Figure 16 Dry pool.



Figure 17. Wood frog egg mass.

Pool 9

N 42.09624

W 072.64832

100' x 250'

Comments: Large Marsh at the east end of the park along the power lines corridor.

Looks like great spotted turtle habitat, but none seen, spring peepers calling, 1 wood frog egg mass in ditch.



Figure 18. Pool number 9.

Potential vernal pools to be certified in the spring of 2008

1) N 42.09601
W 072.65060
(Near Pool 9)
“PVP3”

2) N 42.09585
W 072.65501
“PVP 1”
Very Small (25' x 30')



Figure 19. Potential vernal pool #1.

3) N 42.09609
W 072.65589
“PVP2”, Very small, no pooling, on slope to river (20' x 20')



Figure 20. Potential vernal pool #2



Figure 21. Potential vernal pools at Robinson State Park.



Natural Heritage & Endangered Species Program Massachusetts Division of Fisheries and Wildlife Vernal Pool Field Observation Form

(7/99)

(For use with *Guidelines for Certification of Vernal Pool Habitat*)

For office use only.

1. Pool location

Town Agawam

County Hampden

USGS Quadrangle name

N. 42. 05782 09624

☐ SERIES 7.5' X 7.5'

☐ SERIES 7.5' X 15'

WRITTEN DIRECTIONS TO POOL:

large marsh at the
east end of park along power
lines corridor. looks like great
spotted turtle habitat

GPS format & see Al Richmond

Robinson State Park

THIS INFORMATION
MUST BE SUBMITTED

(USE ADDITIONAL PAGES, IF NECESSARY.)

Instructions

FOR COMPLETE INFORMATION ABOUT CERTIFICATION, REFER TO *GUIDELINES FOR CERTIFICATION OF VERNAL POOL HABITAT*.

PROVIDE ALL OF THE INFORMATION REQUESTED IN BOXES 1-6. IF MORE SPACE IS REQUIRED, ATTACH ADDITIONAL PAGES. INCLUDE ALL REQUIRED PHOTOGRAPHS AND DOCUMENTATION. SIGN THE FORM IN THE AREA PROVIDED ON THE REVERSE SIDE. INCOMPLETE OR UNSIGNED SUBMISSIONS WILL BE RETURNED.

THE FOLLOWING INSTRUCTIONS REFER TO EACH OF THE NUMBERED BOXES.

1. THE 7.5 X 7.5 SERIES HAS THE LEGEND "7.5 MINUTE SERIES" IN THE UPPER RIGHT HAND CORNER ALONG WITH THE QUADRANGLE NAME. THE 7.5 X 15 MINUTE SERIES IS SO LABELED IN THE UPPER RIGHT HAND CORNER AND HAS THE QUADRANGLE NAME IN THE LOWER RIGHT CORNER.

WRITTEN DIRECTIONS MUST BE INCLUDED.

2. INDICATE THE FIRST AND LAST DATES THAT THE POOL OR ITS BIOLOGICAL COMPONENTS WERE OBSERVED.

3. PART A AND B ARE FOR CERTIFICATION BY OBLIGATE SPECIES. PART C IS EITHER FOR ADDITIONAL INFORMATION (APPRECIATED) OR FOR CERTIFICATION BY THE FACULTATIVE SPECIES. IF CERTIFYING BY OBLIGATE SPECIES, PROVIDE A PHOTOGRAPH OF THE POOL HOLDING WATER AND AT LEAST ONE PHOTOGRAPH (OR AUDIO TAPE FOR CHORUSING) OF BREEDING ACTIVITY.

FOR CERTIFICATION BY FACULTATIVE SPECIES, PROVIDE PHOTOGRAPHS OF THE POOL HOLDING WATER AND PHOTOGRAPHS (OR TAPES) OF THE FACULTATIVE SPECIES AS REQUIRED. ADDITIONALLY, PROVIDE A PHOTOGRAPH OF THE POOL WHEN DRY OR OTHERWISE PROVE THAT IT HAS NO FISH.

2. Observation dates

First date pool/species observed

4/24/07

Last date pool observed

10/9/07

Last date species observed

4/24/07

3 A. Evidence: obligate amphibians

Indicate date of observation.

* = RARE SPECIES	COURTING ADULTS	SPERMATOPHYTES	EGG MASSES	SALAMANDER LARVAE	TRANSFORMING JUVENILES
SPOTTED SALAMANDER					
* BLUE-SPOTTED SALAMANDER					
* JEFFERSON SALAMANDER					
* MARBLED SALAMANDER					
UNIDENTIFIED MOLE SALAMANDER					
	BREEDING CHORUS	MATED PAIRS	EGG MASSES	FROG TADPOLES	TRANSFORMING JUVENILES
WOOD FROG			<u>1 4/29</u>		
* SPADEFOOT TOAD					

3 B. Evidence: fairy shrimp

DATE OBSERVED

3 C. Evidence: facultative organisms

Indicate date of observation.

* = RARE SPECIES	DATE OBSERVED	ACTIVITY OBSERVED		DATE OBSERVED	ACTIVITY OBSERVED
BREEDING SPRING PEEPERS	<u>4/29</u>	<u>calling</u>			
BREEDING GRAY TREEFROGS			PAINTED TURTLES		
BREEDING GREEN FROGS			SNAPPING TURTLES		
BREEDING LEOPARD FROGS			PREDACEOUS DIVING BEETLE LARVAE		
BREEDING PICKEREL FROGS			WATER SCORPIONS		
BREEDING AMERICAN TOADS			DRAGONFLY NYMPHS		
BREEDING FOWLER'S TOADS			DAMSELFLY NYMPHS		
* BREEDING FOUR-TOED SALAMANDERS			DOBSONFLY LARVAE		
RED-SPOTTED NEWT (ADULTS)			WHIRLGIG BEETLE LARVAE		
* SPOTTED TURTLES			CADDISFLY LARVAE		
			LEECHES		

Instructions (continued)

4. INDICATE THE PHOTOGRAPHS BEING SUBMITTED. LABEL, DATE, AND SIGN ALL PHOTOS.

5. MARK THE POOL CLEARLY ON ALL MAPS. THE POOL MUST BE CLEARLY DISTINGUISHED FROM OTHER WETLANDS AND BE RELOCATEABLE BY OTHERS. PROVIDE ANY MAPS THAT WOULD HELP SOMEONE UNFAMILIAR WITH THE AREA LOCATE THE VERNAL POOL IN THE FIELD.

6. THE FORM MUST BE SIGNED. UNSIGNED SUBMISSIONS WILL BE RETURNED WITHOUT FURTHER ACTION.

OPTIONAL INFORMATION:

PROPERTY OWNER. PROVIDE INFORMATION ABOUT PROPERTY OWNER(S), IF KNOWN. IT IS RECOMMENDED THAT YOU SEEK PROPERTY OWNER PERMISSION PRIOR TO CERTIFICATION ACTIVITIES.

RARE SPECIES. A PHOTOGRAPH IS NECESSARY FOR DOCUMENTATION OF RARE SPECIES HABITAT.

DESCRIPTION. PROVIDE ANY INFORMATION THAT WILL DISTINGUISH THE POOL FROM OTHER WETLANDS (BOULDERS, DEBRIS, TREE SPECIES, ETC.).

Optional information

Although the following information is not required for certification, it is useful to NH&ESP to possibly better protect the vernal pool, its habitat and species.

Property owner

IT IS STRONGLY RECOMMENDED THAT LANDOWNER PERMISSION BE OBTAINED PRIOR TO COLLECTING CERTIFICATION DOCUMENTATION.

Name DCR
Address Robinson State Park
North Street
Town Agawam State MA ZIP 01001

Rare wetland species

☒ ☐ WERE ANY RARE STATE-LISTED SPECIES OBSERVED USING THIS POOL?

☒ ☐ IS A PHOTOGRAPH OF THE RARE SPECIES INCLUDED WITH THIS FILING?

Description of pool and surroundings

DIMENSIONS: APPROXIMATE LENGTH

APPROXIMATE WIDTH

APPROXIMATE DEPTH

DESCRIBE DISTINCTIVE FEATURES (ROADS, STRUCTURES, BOULDERS, ETC.) WHICH ARE VISIBLE FROM OR NEAR THE POOL.

Large marsh at east end of park, along the power lines corridor. Looks like great spotted turtle habitat.

ARE THERE OTHER DISTINCTIVE FEATURES ABOUT THIS POOL (VEGETATION TYPES, ABANDONED VEHICLES, FOOT TRAILS, ETC.) THAT WOULD HELP SOMEONE RECOGNIZE IT?

4. Photographs

MUST BE LABELED, DATED, AND SIGNED.

- ☐ POOL HOLDING WATER
☐ OBLIGATE +/-OR FACULTATIVE SPECIES
☐ DRY POOL (REQUIRED FOR EVIDENCE 3C)

5. Maps submitted

☒ USGS TOPOGRAPHIC MAP (REQUIRED)

AND ONE OR MORE OF THE FOLLOWING:

- ☒ AERIAL PHOTOGRAPH
☐ DISTANCES/COMPASS DIRECTIONS
☐ PROFESSIONAL SURVEY
☐ LARGE SCALE TOPO
☐ OTHER _____

OPTIONAL EXTRA INFORMATION

- ☒ SKETCH MAP OF AREA
☐ ASSESSOR'S MAP
☒ GPS LONGITUDE/LATITUDE COORDINATES

6. Observer information & signature

Name David Paulson
Address Hobbsworth Hall
Hobbsworth Way (UMASS)
Town Amherst State MA ZIP 01003
Telephone 1-508-863-8725
e-mail DPAULSON@ACAD.UMASS.EDU

I hereby certify under the pains and penalties of perjury that the information contained in this report is true and complete to the best of my knowledge.

David Paulson

SEND COMPLETED FORM AND SUPPORTING DOCUMENTATION TO:

NH&ESP
VERNAL POOL CERTIFICATION
MA DIVISION OF FISHERIES & WILDLIFE
ROUTE 135
WESTBOROUGH, MA 01581

All submissions and supporting documents will be retained by the Natural Heritage & Endangered Species Program. Information submitted on this form and other documents is part of the public record and is available to interested parties under the State Documents



Natural Heritage & Endangered Species Program Massachusetts Division of Fisheries and Wildlife Vernal Pool Field Observation Form

(7/99)

(For use with Guidelines for Certification of Vernal Pool Habitat)

For office use only.

1. Pool location

"Pool 8"

Town Agawam County HampdenUSGS Quadrangle name N 42. 05742 09569 ☐ SERIES 7.5' X 7.5'W 072. 38978 64941 ☐ SERIES 7.5' X 15'

WRITTEN DIRECTIONS TO POOL:

+ USSRC Sedge marsh
at east end of park.GPS Format 2 see At RichmondRobinson State ParkTHIS INFORMATION
MUST BE SUBMITTED

(USE ADDITIONAL PAGES, IF NECESSARY.)

Instructions

FOR COMPLETE INFORMATION ABOUT
CERTIFICATION, REFER TO GUIDELINES FOR
CERTIFICATION OF VERNAL POOL HABITAT.PROVIDE ALL OF THE INFORMATION
REQUESTED IN BOXES 1-6. IF MORE SPACE
IS REQUIRED, ATTACH ADDITIONAL PAGES.
INCLUDE ALL REQUIRED PHOTOGRAPHS AND
DOCUMENTATION. SIGN THE FORM IN THE
AREA PROVIDED ON THE REVERSE SIDE.
INCOMPLETE OR UNSIGNED SUBMISSIONS
WILL BE RETURNED.THE FOLLOWING INSTRUCTIONS REFER TO
EACH OF THE NUMBERED BOXES.1. THE 7.5 X 7.5 SERIES HAS THE
LEGEND "7.5 MINUTE SERIES" IN THE UPPER
RIGHT HAND CORNER ALONG WITH THE
QUADRANGLE NAME. THE 7.5 X 15 MINUTE
SERIES IS SO LABELED IN THE UPPER RIGHT
HAND CORNER AND HAS THE QUADRANGLE
NAME IN THE LOWER RIGHT CORNER.

WRITTEN DIRECTIONS MUST BE INCLUDED.

2 INDICATE THE FIRST AND LAST DATES
THAT THE POOL OR ITS BIOLOGICAL
COMPONENTS WERE OBSERVED.3. PART A AND B ARE FOR CERTIFICATION
BY OBLIGATE SPECIES. PART C IS
EITHER FOR ADDITIONAL INFORMATION
(APPRECIATED) OR FOR CERTIFICATION BY
THE FACULTATIVE SPECIES. IF CERTIFYING BY
OBLIGATE SPECIES, PROVIDE A PHOTOGRAPH
OF THE POOL HOLDING WATER AND AT LEAST
ONE PHOTOGRAPH (OR AUDIO TAPE FOR
CHORUSING) OF BREEDING ACTIVITY.FOR CERTIFICATION BY FACULTATIVE
SPECIES, PROVIDE PHOTOGRAPHS OF THE
POOL HOLDING WATER AND PHOTOGRAPHS
(OR TAPES) OF THE FACULTATIVE SPECIES AS
REQUIRED. ADDITIONALLY, PROVIDE A
PHOTOGRAPH OF THE POOL WHEN DRY OR
OTHERWISE PROVE THAT IT HAS NO FISH.

2. Observation dates

First date pool/species observed 4/24/07Last date pool observed 10/9/07 Last date species observed 4/24/07

3 A. Evidence: obligate amphibians

Indicate date of observation.

* = RARE SPECIES	COURTING ADULTS	SPERMATOPHORES	EGG MASSES	SALAMANDER LARVAE	TRANSFORMING JUVENILES
SPOTTED SALAMANDER					
* BLUE-SPOTTED SALAMANDER					
* JEFFERSON SALAMANDER					
* MARBLED SALAMANDER					
UNIDENTIFIED MOLE SALAMANDER					
	BREEDING CHORUS	MATED PAIRS	EGG MASSES	FROG TADPOLES	TRANSFORMING JUVENILES
WOOD FROG			<u>50+ 4/29</u>		
* SPADEFOOT TOAD					

3 B. Evidence: fairy
shrimp

DATE OBSERVED _____

3 C. Evidence: facultative organisms

Indicate date of observation.

* = RARE SPECIES	DATE OBSERVED	ACTIVITY OBSERVED		DATE OBSERVED	ACTIVITY OBSERVED
BREEDING SPRING PEEPERS	<u>4/29</u>	<u>calling (6)</u>	PAINTED TURTLES	<u>4/29</u>	<u>(1) present</u>
BREEDING GRAY TREEFROGS			SNAPPING TURTLES		
BREEDING GREEN FROGS			PREDACEOUS DIVING BEETLE LARVAE		
BREEDING LEOPARD FROGS			WATER SCORPIONS		
BREEDING PICKERAL FROGS			DRAGONFLY NYMPHS		
BREEDING AMERICAN TOADS			DAMSELFLY NYMPHS		
BREEDING FOWLER'S TOADS			DOBSONFLY LARVAE		
* BREEDING FOUR-TOED SALAMANDERS			WHIRLIGIG BEETLE LARVAE		
RED-SPOTTED NEWT (ADULTS)			CADDISFLY LARVAE		
* SPOTTED TURTLES			LEECHES		

Instructions (continued)

4. INDICATE THE PHOTOGRAPHS BEING SUBMITTED. LABEL, DATE, AND SIGN ALL PHOTOS.
5. MARK THE POOL CLEARLY ON ALL MAPS. THE POOL MUST BE CLEARLY DISTINGUISHED FROM OTHER WETLANDS AND BE RELOCATEABLE BY OTHERS. PROVIDE ANY MAPS THAT WOULD HELP SOMEONE UNFAMILIAR WITH THE AREA LOCATE THE VERNAL POOL IN THE FIELD.
6. THE FORM MUST BE SIGNED. UNSIGNED SUBMISSIONS WILL BE RETURNED WITHOUT FURTHER ACTION.

OPTIONAL INFORMATION:

PROPERTY OWNER. PROVIDE INFORMATION ABOUT PROPERTY OWNER(S), IF KNOWN. IT IS RECOMMENDED THAT YOU SEEK PROPERTY OWNER PERMISSION PRIOR TO CERTIFICATION ACTIVITIES.

RARE SPECIES. A PHOTOGRAPH IS NECESSARY FOR DOCUMENTATION OF RARE SPECIES HABITAT. DESCRIPTION. PROVIDE ANY INFORMATION THAT WILL DISTINGUISH THE POOL FROM OTHER WETLANDS (BOULDERS, DEBRIS, TREE SPECIES, ETC.).

Optional information

Although the following information is not required for certification, it is useful to NH&ESP to possibly better protect the vernal pool, its habitat and species.

Property owner

IT IS STRONGLY RECOMMENDED THAT LANDOWNER PERMISSION BE OBTAINED PRIOR TO COLLECTING CERTIFICATION DOCUMENTATION.

Name DCR

Address Robinson State Park
North Street

Town Agawam State MA ZIP 01001

Rare wetland species

☒ ☐ WERE ANY RARE STATE-LISTED SPECIES OBSERVED USING THIS POOL?

☐ ☒ IS A PHOTOGRAPH OF THE RARE SPECIES INCLUDED WITH THIS FILING?

Description of pool and surroundings

DIMENSIONS: APPROXIMATE LENGTH _____ APPROXIMATE WIDTH _____

APPROXIMATE DEPTH _____

DESCRIBE DISTINCTIVE FEATURES (ROADS, STRUCTURES, BOULDERS, ETC.) WHICH ARE VISIBLE FROM OR NEAR THE POOL.

tussac sedge marsh at
east end of park

ARE THERE OTHER DISTINCTIVE FEATURES ABOUT THIS POOL (VEGETATION TYPES, ABANDONED VEHICLES, FOOT TRAILS, ETC.) THAT WOULD HELP SOMEONE RECOGNIZE IT?

4. Photographs

MUST BE LABELED, DATED, AND SIGNED.

- ☒ POOL HOLDING WATER
- ☒ OBLIGATE +/-OR FACULTATIVE SPECIES
- ☐ DRY POOL (REQUIRED FOR EVIDENCE 3C)

5 Maps submitted

☒ USGS TOPOGRAPHIC MAP (REQUIRED)

AND ONE OR MORE OF THE FOLLOWING:

- ☒ AERIAL PHOTOGRAPH
- ☐ DISTANCES/COMPASS DIRECTIONS
- ☐ PROFESSIONAL SURVEY
- ☐ LARGE SCALE TOPO
- ☐ OTHER _____

OPTIONAL EXTRA INFORMATION

- ☒ SKETCH MAP OF AREA
- ☐ ASSESSOR'S MAP
- ☒ GPS LONGITUDE/LATITUDE COORDINATES

6. Observer information & signature

Name David Paulsen

Address Holdsworth Hall
Holdsworth Way (UMASS)

Town Amherst State MA ZIP 01003

Telephone 1-508-863-8725

e-mail DPAULSON@ACAD.UMASS.EDU

I hereby certify under the pains and penalties of perjury that the information contained in this report is true and complete to the best of my knowledge.

David Paulsen

SEND COMPLETED FORM AND SUPPORTING DOCUMENTATION TO:

NH&ESP
VERNAL POOL CERTIFICATION
MA DIVISION OF FISHERIES & WILDLIFE
ROUTE 135
WESTBOROUGH, MA 01581

All submissions and supporting documents will be retained by the Natural Heritage & Endangered Species Program. Information submitted on this form and other documents is part of the public record and is available to interested parties under the State Documents



Natural Heritage & Endangered Species Program Massachusetts Division of Fisheries and Wildlife Vernal Pool Field Observation Form

(7/99)

(For use with Guidelines for Certification of Vernal Pool Habitat)

For office use only.

1. Pool location "Pool 7"

Town Agawam County Hampden

USGS Quadrangle name N 42. 08707 ☐ SERIES 7.5' X 7.5'

W 072. 67033 ☐ SERIES 7.5' X 15'

WRITTEN DIRECTIONS TO POOL: Right behind "pool 6"

Ray Webster called this "Trotter"

pool 2

GPS format & hold. dddd

Robinson State Park

(USE ADDITIONAL PAGES, IF NECESSARY.)

2. Observation dates

First date pool/species observed 4/24/07

Last date pool observed 10/9/07 Last date species observed 4/24/07

3 A. Evidence: obligate amphibians Indicate date of observation.

* = RARE SPECIES	COURTING ADULTS	SPERMATOPHYTES	EGG MASSES	SALAMANDER LARVAE	TRANSFORMING JUVENILES
SPOTTED SALAMANDER					
* BLUE-SPOTTED SALAMANDER					
* JEFFERSON SALAMANDER					
* MARBLED SALAMANDER					
UNIDENTIFIED MOLE SALAMANDER					
	BREEDING CHORUS	MATED PAIRS	EGG MASSES	FROG TADPOLES	TRANSFORMING JUVENILES
WOOD FROG			<u>20</u>		
* SPADEFOOT TOAD					

Instructions

FOR COMPLETE INFORMATION ABOUT CERTIFICATION, REFER TO GUIDELINES FOR CERTIFICATION OF VERNAL POOL HABITAT.

PROVIDE ALL OF THE INFORMATION REQUESTED IN BOXES 1-6. IF MORE SPACE IS REQUIRED, ATTACH ADDITIONAL PAGES. INCLUDE ALL REQUIRED PHOTOGRAPHS AND DOCUMENTATION. SIGN THE FORM IN THE AREA PROVIDED ON THE REVERSE SIDE. INCOMPLETE OR UNSIGNED SUBMISSIONS WILL BE RETURNED.

THE FOLLOWING INSTRUCTIONS REFER TO EACH OF THE NUMBERED BOXES.

1. THE 7.5 X 7.5 SERIES HAS THE LEGEND "7.5 MINUTE SERIES" IN THE UPPER RIGHT HAND CORNER ALONG WITH THE QUADRANGLE NAME. THE 7.5 X 15 MINUTE SERIES IS SO LABELED IN THE UPPER RIGHT HAND CORNER AND HAS THE QUADRANGLE NAME IN THE LOWER RIGHT CORNER.

WRITTEN DIRECTIONS MUST BE INCLUDED.

2. INDICATE THE FIRST AND LAST DATES THAT THE POOL OR ITS BIOLOGICAL COMPONENTS WERE OBSERVED.

3. PART A AND B ARE FOR CERTIFICATION BY OBLIGATE SPECIES. PART C IS EITHER FOR ADDITIONAL INFORMATION (APPRECIATED) OR FOR CERTIFICATION BY THE FACULTATIVE SPECIES. IF CERTIFYING BY OBLIGATE SPECIES, PROVIDE A PHOTOGRAPH OF THE POOL HOLDING WATER AND AT LEAST ONE PHOTOGRAPH (OR AUDIO TAPE FOR CHORUSING) OF BREEDING ACTIVITY.

FOR CERTIFICATION BY FACULTATIVE SPECIES, PROVIDE PHOTOGRAPHS OF THE POOL HOLDING WATER AND PHOTOGRAPHS (OR TAPES) OF THE FACULTATIVE SPECIES AS REQUIRED. ADDITIONALLY, PROVIDE A PHOTOGRAPH OF THE POOL WHEN DRY OR OTHERWISE PROVE THAT IT HAS NO FISH.

3 B. Evidence: fairy shrimp

DATE OBSERVED _____

3 C. Evidence: facultative organisms Indicate date of observation.

* = RARE SPECIES	DATE OBSERVED	ACTIVITY OBSERVED
BREEDING SPRING PEEPERS		
BREEDING GRAY TREEFROGS		
BREEDING GREEN FROGS		
BREEDING LEOPARD FROGS		
BREEDING PICKEREL FROGS		
BREEDING AMERICAN TOADS		
BREEDING FOWLER'S TOADS		
* BREEDING FOUR-TOED SALAMANDERS		
RED-SPOTTED NEWT (ADULTS)		
* SPOTTED TURTLES		

	DATE OBSERVED	ACTIVITY OBSERVED
PAINTED TURTLES		
SNAPPING TURTLES		
PREDACEOUS DIVING BEETLE LARVAE		
WATER SCORPIONS		
DRAGONFLY NYMPHS		
DAMSELFLY NYMPHS		
DOBSONFLY LARVAE		
WHIRLIGIG BEETLE LARVAE		
CADDISFLY LARVAE		
LEECHES		

Instructions (continued)

4. INDICATE THE PHOTOGRAPHS BEING SUBMITTED. LABEL, DATE, AND SIGN ALL PHOTOS.

5. MARK THE POOL CLEARLY ON ALL MAPS. THE POOL MUST BE CLEARLY DISTINGUISHED FROM OTHER WETLANDS AND BE RELOCATEABLE BY OTHERS. PROVIDE ANY MAPS THAT WOULD HELP SOMEONE UNFAMILIAR WITH THE AREA LOCATE THE VERNAL POOL IN THE FIELD.

6. THE FORM MUST BE SIGNED. UNSIGNED SUBMISSIONS WILL BE RETURNED WITHOUT FURTHER ACTION.

OPTIONAL INFORMATION:

PROPERTY OWNER. PROVIDE INFORMATION ABOUT PROPERTY OWNER(S), IF KNOWN. IT IS RECOMMENDED THAT YOU SEEK PROPERTY OWNER PERMISSION PRIOR TO CERTIFICATION ACTIVITIES.

RARE SPECIES. A PHOTOGRAPH IS NECESSARY FOR DOCUMENTATION OF RARE SPECIES HABITAT.

DESCRIPTION. PROVIDE ANY INFORMATION THAT WILL DISTINGUISH THE POOL FROM OTHER WETLANDS (BOULDERS, DEBRIS, TREE SPECIES, ETC.).

Optional information

Although the following information is not required for certification, it is useful to NHESP to possibly better protect the vernal pool, its habitat and species.

Property owner

IT IS STRONGLY RECOMMENDED THAT LANDOWNER PERMISSION BE OBTAINED PRIOR TO COLLECTING CERTIFICATION DOCUMENTATION.

Name

DCR

Address

Robinson State Park
North Street

Town

Agawam

State

MA

ZIP

01001

Rare wetland species

☒ ☐

WERE ANY RARE STATE-LISTED SPECIES OBSERVED USING THIS POOL?

☒ ☐

IS A PHOTOGRAPH OF THE RARE SPECIES INCLUDED WITH THIS FILING?

Description of pool and surroundings

DIMENSIONS: APPROXIMATE LENGTH

64'

APPROXIMATE WIDTH

70'

APPROXIMATE DEPTH

DESCRIBE DISTINCTIVE FEATURES (ROADS, STRUCTURES, BOULDERS, ETC.) WHICH ARE VISIBLE FROM OR NEAR THE POOL.

Pool right behind "pool 6"
Ray Webber called it "hostle pool 2"

ARE THERE OTHER DISTINCTIVE FEATURES ABOUT THIS POOL (VEGETATION TYPES, ABANDONED VEHICLES, FOOT TRAILS, ETC.) THAT WOULD HELP SOMEONE RECOGNIZE IT?

4. Photographs

MUST BE LABELED, DATED, AND SIGNED.

☐

POOL HOLDING WATER

☐

OBLIGATE +/-OR FACULTATIVE SPECIES

☒

DRY POOL (REQUIRED FOR EVIDENCE 3C)

5 Maps submitted

☒

USGS TOPOGRAPHIC MAP (REQUIRED)

AND ONE OR MORE OF THE FOLLOWING:

☒

AERIAL PHOTOGRAPH

☐

DISTANCES/COMPASS DIRECTIONS

☐

PROFESSIONAL SURVEY

☐

LARGE SCALE TOPO

☐

OTHER _____

OPTIONAL EXTRA INFORMATION

☒

SKETCH MAP OF AREA

☐

ASSESSOR'S MAP

☒

GPS LONGITUDE/LATITUDE COORDINATES

6. Observer information & signature

Name

David Paulson

Address

Holdsworth Hall

Holdsworth Way (UMASS)

Town

Amherst

State

MA

ZIP

01003

Telephone

1-508-813-8725

e-mail

DPAULSON@ACAD.UMASS.EDU

I hereby certify under the pains and penalties of perjury that the information contained in this report is true and complete to the best of my knowledge.

David Paulson

SEND COMPLETED FORM AND SUPPORTING DOCUMENTATION TO:

NH&ESP
VERNAL POOL CERTIFICATION
MA DIVISION OF FISHERIES & WILDLIFE
ROUTE 135
WESTBOROUGH, MA 01581

All submissions and supporting documents will be retained by the Natural Heritage & Endangered Species Program. Information submitted on this form and other documents is part of the public record and is available to interested parties under the State Documents



Natural Heritage & Endangered Species Program Massachusetts Division of Fisheries and Wildlife Vernal Pool Field Observation Form

(7/99)

(For use with Guidelines for Certification of Vernal Pool Habitat)

For office use only.

1. Pool location

"Pool 6"

Town Agawam

County Hampden

USGS Quadrangle name N 42. 08711

☐ SERIES 7.5' X 7.5'

☐ SERIES 7.5' X 15'

WRITTEN DIRECTIONS TO POOL:

Webber called this "trout"
pool. 50 feet off park road near
trout sign. It has an electrical line
running through its basin.

THIS INFORMATION
MUST BE SUBMITTED

GPS format: 42.08711, -71.00000
Robinson State Park

(USE ADDITIONAL PAGES, IF NECESSARY.)

Instructions

FOR COMPLETE INFORMATION ABOUT CERTIFICATION, REFER TO GUIDELINES FOR CERTIFICATION OF VERNAL POOL HABITAT.

PROVIDE ALL OF THE INFORMATION REQUESTED IN BOXES 1-6. IF MORE SPACE IS REQUIRED, ATTACH ADDITIONAL PAGES. INCLUDE ALL REQUIRED PHOTOGRAPHS AND DOCUMENTATION. SIGN THE FORM IN THE AREA PROVIDED ON THE REVERSE SIDE. INCOMPLETE OR UNSIGNED SUBMISSIONS WILL BE RETURNED.

THE FOLLOWING INSTRUCTIONS REFER TO EACH OF THE NUMBERED BOXES.

1. THE 7.5 X 7.5 SERIES HAS THE LEGEND "7.5 MINUTE SERIES" IN THE UPPER RIGHT HAND CORNER ALONG WITH THE QUADRANGLE NAME. THE 7.5 X 15 MINUTE SERIES IS SO LABELED IN THE UPPER RIGHT HAND CORNER AND HAS THE QUADRANGLE NAME IN THE LOWER RIGHT CORNER.

WRITTEN DIRECTIONS MUST BE INCLUDED.

2. INDICATE THE FIRST AND LAST DATES THAT THE POOL OR ITS BIOLOGICAL COMPONENTS WERE OBSERVED.

3. PART A AND B ARE FOR CERTIFICATION BY OBLIGATE SPECIES. PART C IS EITHER FOR ADDITIONAL INFORMATION (APPRECIATED) OR FOR CERTIFICATION BY THE FACULTATIVE SPECIES. IF CERTIFYING BY OBLIGATE SPECIES, PROVIDE A PHOTOGRAPH OF THE POOL HOLDING WATER AND AT LEAST ONE PHOTOGRAPH (OR AUDIO TAPE FOR CHORUSING) OF BREEDING ACTIVITY.

FOR CERTIFICATION BY FACULTATIVE SPECIES, PROVIDE PHOTOGRAPHS OF THE POOL HOLDING WATER AND PHOTOGRAPHS (OR TAPES) OF THE FACULTATIVE SPECIES AS REQUIRED. ADDITIONALLY, PROVIDE A PHOTOGRAPH OF THE POOL WHEN DRY OR OTHERWISE PROVE THAT IT HAS NO FISH.

2. Observation dates

First date pool/species observed 4/24/07

Last date pool observed 10/4/07 Last date species observed 4/24/07

3 A. Evidence: obligate amphibians

Indicate date of observation.

* = RARE SPECIES	COURTING ADULTS	SPERMATOPHYTES	EGG MASSES	SALAMANDER LARVAE	TRANSFORMING JUVENILES
SPOTTED SALAMANDER					
* BLUE-SPOTTED SALAMANDER					
* JEFFERSON SALAMANDER					
* MARBLED SALAMANDER					
UNIDENTIFIED MOLE SALAMANDER					
	BREEDING CHORUS	MATED PAIRS	EGG MASSES	FROG TADPOLES	TRANSFORMING JUVENILES
WOOD FROG			<u>4/24</u> <u>60-70</u>		
* SPADEFOOT TOAD					

3 B. Evidence: fairy shrimp

DATE OBSERVED _____

3 C. Evidence: facultative organisms

Indicate date of observation.

* = RARE SPECIES	DATE OBSERVED	ACTIVITY OBSERVED		DATE OBSERVED	ACTIVITY OBSERVED
BREEDING SPRING PEEPERS			PAINTED TURTLES		
BREEDING GRAY TREEFROGS			SNAPPING TURTLES		
BREEDING GREEN FROGS			PREDACEOUS DIVING BEETLE LARVAE		
BREEDING LEOPARD FROGS			WATER SCORPIONS		
BREEDING PICKEREL FROGS			DRAGONFLY NYMPHS		
BREEDING AMERICAN TOADS			DAMSELFLY NYMPHS		
BREEDING FOWLER'S TOADS			DOBSONFLY LARVAE		
* BREEDING FOUR-TOED SALAMANDERS			WHIRLIGIG BEETLE LARVAE		
RED-SPOTTED NEWT (ADULTS)			CADDISFLY LARVAE		
* SPOTTED TURTLES			LEECHES		

Instructions (continued)

4. INDICATE THE PHOTOGRAPHS BEING SUBMITTED. LABEL, DATE, AND SIGN ALL PHOTOS.

5. MARK THE POOL CLEARLY ON ALL MAPS. THE POOL MUST BE CLEARLY DISTINGUISHED FROM OTHER WETLANDS AND BE RELOCATEABLE BY OTHERS. PROVIDE ANY MAPS THAT WOULD HELP SOMEONE UNFAMILIAR WITH THE AREA LOCATE THE VERNAL POOL IN THE FIELD.

6. THE FORM MUST BE SIGNED. UNSIGNED SUBMISSIONS WILL BE RETURNED WITHOUT FURTHER ACTION.

OPTIONAL INFORMATION:

PROPERTY OWNER. PROVIDE INFORMATION ABOUT PROPERTY OWNER(S), IF KNOWN. IT IS RECOMMENDED THAT YOU SEEK PROPERTY OWNER PERMISSION PRIOR TO CERTIFICATION ACTIVITIES.

RARE SPECIES. A PHOTOGRAPH IS NECESSARY FOR DOCUMENTATION OF RARE SPECIES HABITAT.

DESCRIPTION. PROVIDE ANY INFORMATION THAT WILL DISTINGUISH THE POOL FROM OTHER WETLANDS (BOULDERS, DEBRIS, TREE SPECIES, ETC.).

Optional information

Although the following information is not required for certification, it is useful to NH&ESP to possibly better protect the vernal pool, its habitat and species.

Property owner

IT IS STRONGLY RECOMMENDED THAT LANDOWNER PERMISSION BE OBTAINED PRIOR TO COLLECTING CERTIFICATION DOCUMENTATION.

Name

DCR

Address

North Street

Robinson State Park

Town

Agewam

State

MA ZIP 01001

Rare wetland species

☒ Y ☐ N

WERE ANY RARE STATE-LISTED SPECIES OBSERVED USING THIS POOL?

☐ Y ☒ N

IS A PHOTOGRAPH OF THE RARE SPECIES INCLUDED WITH THIS FILING?

Description of pool and surroundings

DIMENSIONS: APPROXIMATE LENGTH

140'

APPROXIMATE WIDTH

44'

APPROXIMATE DEPTH

DESCRIBE DISTINCTIVE FEATURES (ROADS, STRUCTURES, BOULDERS, ETC.) WHICH ARE VISIBLE FROM OR NEAR THE POOL.

50' off park road near "trout sign"
electrical line running through bush

ARE THERE OTHER DISTINCTIVE FEATURES ABOUT THIS POOL (VEGETATION TYPES, ABANDONED VEHICLES, FOOT TRAILS, ETC.) THAT WOULD HELP SOMEONE RECOGNIZE IT?

4. Photographs

MUST BE LABELED, DATED, AND SIGNED.



POOL HOLDING WATER

OBLIGATE +/-OR FACULTATIVE SPECIES

DRY POOL (REQUIRED FOR EVIDENCE 3C)

5. Maps submitted



USGS TOPOGRAPHIC MAP (REQUIRED)

AND ONE OR MORE OF THE FOLLOWING:



AERIAL PHOTOGRAPH



DISTANCES/COMPASS DIRECTIONS



PROFESSIONAL SURVEY



LARGE SCALE TOPO



OTHER

OPTIONAL EXTRA INFORMATION



SKETCH MAP OF AREA



ASSESSOR'S MAP



GPS LONGITUDE/LATITUDE COORDINATES

6. Observer information & signature

Name

David Paulson

Address

Holdsworth Hall

Holdsworth Way (UMASS)

Town

Amherst

State

MA

ZIP

01003

Telephone

1-508-813-8225

e-mail

DPAULSON@ACAD.UMASS.EDU

I hereby certify under the pains and penalties of perjury that the information contained in this report is true and complete to the best of my knowledge.

David Paulson

SEND COMPLETED FORM AND SUPPORTING DOCUMENTATION TO:

NH&ESP
VERNAL POOL CERTIFICATION
MA DIVISION OF FISHERIES & WILDLIFE
ROUTE 135
WESTBOROUGH, MA 01581

All submissions and supporting documents will be retained by the Natural Heritage & Endangered Species Program. Information submitted on this form and other documents is part of the public record and is available to interested parties under the State Documents



Natural Heritage & Endangered Species Program Massachusetts Division of Fisheries and Wildlife Vernal Pool Field Observation Form

(7/99)

(For use with Guidelines for Certification of Vernal Pool Habitat)

For office use only.

1. Pool location

"Pool 4"

Town Agawam

County Hampden

N 42.10044

USGS Quadrangle name W 072.68243

☐ SERIES 7.5' X 7.5'

☐ SERIES 7.5' X 15'

WRITTEN DIRECTIONS TO POOL:

Small pool along side
of road in park

GPS Earmark hold. 00000

Robinson State Park

THIS INFORMATION
MUST BE SUBMITTED

(USE ADDITIONAL PAGES, IF NECESSARY.)

Instructions

FOR COMPLETE INFORMATION ABOUT CERTIFICATION, REFER TO GUIDELINES FOR CERTIFICATION OF VERNAL POOL HABITAT.

PROVIDE ALL OF THE INFORMATION REQUESTED IN BOXES 1-6. IF MORE SPACE IS REQUIRED, ATTACH ADDITIONAL PAGES. INCLUDE ALL REQUIRED PHOTOGRAPHS AND DOCUMENTATION. SIGN THE FORM IN THE AREA PROVIDED ON THE REVERSE SIDE. INCOMPLETE OR UNSIGNED SUBMISSIONS WILL BE RETURNED.

THE FOLLOWING INSTRUCTIONS REFER TO EACH OF THE NUMBERED BOXES.

1. THE 7.5 X 7.5 SERIES HAS THE LEGEND "7.5 MINUTE SERIES" IN THE UPPER RIGHT HAND CORNER ALONG WITH THE QUADRANGLE NAME. THE 7.5 X 15 MINUTE SERIES IS SO LABELED IN THE UPPER RIGHT HAND CORNER AND HAS THE QUADRANGLE NAME IN THE LOWER RIGHT CORNER.

WRITTEN DIRECTIONS MUST BE INCLUDED.

2. INDICATE THE FIRST AND LAST DATES THAT THE POOL OR ITS BIOLOGICAL COMPONENTS WERE OBSERVED.

3. PART A AND B ARE FOR CERTIFICATION BY OBLIGATE SPECIES. PART C IS EITHER FOR ADDITIONAL INFORMATION (APPRECIATED) OR FOR CERTIFICATION BY THE FACULTATIVE SPECIES. IF CERTIFYING BY OBLIGATE SPECIES, PROVIDE A PHOTOGRAPH OF THE POOL HOLDING WATER AND AT LEAST ONE PHOTOGRAPH (OR AUDIO TAPE FOR CHORUSING) OF BREEDING ACTIVITY.

FOR CERTIFICATION BY FACULTATIVE SPECIES, PROVIDE PHOTOGRAPHS OF THE POOL HOLDING WATER AND PHOTOGRAPHS (OR TAPES) OF THE FACULTATIVE SPECIES AS REQUIRED. ADDITIONALLY, PROVIDE A PHOTOGRAPH OF THE POOL WHEN DRY OR OTHERWISE PROVE THAT IT HAS NO FISH.

2. Observation dates

First date pool/species observed 4/24/07

Last date pool observed 10/9/07 Last date species observed 4/24/07

3 A. Evidence: obligate amphibians

Indicate date of observation.

* = RARE SPECIES	COURTING ADULTS	SPERMATOPHYTES	EGG MASSES	SALAMANDER LARVAE	TRANSFORMING JUVENILES
SPOTTED SALAMANDER					
* BLUE-SPOTTED SALAMANDER					
* JEFFERSON SALAMANDER					
* MARBLED SALAMANDER					
UNIDENTIFIED MOLE SALAMANDER					
	BREEDING CHORUS	MATED PAIRS	EGG MASSES	FROG TADPOLES	TRANSFORMING JUVENILES
WOOD FROG			<u>5</u>		
* SPADEFOOT TOAD					

3 B. Evidence: fairy shrimp

DATE OBSERVED _____

3 C. Evidence: facultative organisms

Indicate date of observation.

* = RARE SPECIES	DATE OBSERVED	ACTIVITY OBSERVED		DATE OBSERVED	ACTIVITY OBSERVED
BREEDING SPRING PEEPERS			PAINTED TURTLES		
BREEDING GRAY TREEFROGS			SNAPPING TURTLES		
BREEDING GREEN FROGS			PREDACEOUS DIVING BEETLE LARVAE		
BREEDING LEOPARD FROGS			WATER SCORPIONS		
BREEDING PICKERAL FROGS			DRAGONFLY NYMPHS		
BREEDING AMERICAN TOADS			DAMSELFLY NYMPHS		
BREEDING FOWLER'S TOADS			DOBSONFLY LARVAE		
* BREEDING FOUR-TOED SALAMANDERS			WHIRLIGIG BEETLE LARVAE		
RED-SPOTTED NEWT (ADULTS)			CADDISFLY LARVAE		
* SPOTTED TURTLES			LEECHES		

Instructions (continued)

4. INDICATE THE PHOTOGRAPHS BEING SUBMITTED. LABEL, DATE, AND SIGN ALL PHOTOS.

5. MARK THE POOL CLEARLY ON ALL MAPS. THE POOL MUST BE CLEARLY DISTINGUISHED FROM OTHER WETLANDS AND BE RELOCATEABLE BY OTHERS. PROVIDE ANY MAPS THAT WOULD HELP SOMEONE UNFAMILIAR WITH THE AREA LOCATE THE VERNAL POOL IN THE FIELD.

6. THE FORM MUST BE SIGNED. UNSIGNED SUBMISSIONS WILL BE RETURNED WITHOUT FURTHER ACTION.

OPTIONAL INFORMATION:

PROPERTY OWNER. PROVIDE INFORMATION ABOUT PROPERTY OWNER(S), IF KNOWN. IT IS RECOMMENDED THAT YOU SEEK PROPERTY OWNER PERMISSION PRIOR TO CERTIFICATION ACTIVITIES.

RARE SPECIES. A PHOTOGRAPH IS NECESSARY FOR DOCUMENTATION OF RARE SPECIES HABITAT.

DESCRIPTION. PROVIDE ANY INFORMATION THAT WILL DISTINGUISH THE POOL FROM OTHER WETLANDS (BOULDERS, DEBRIS, TREE SPECIES, ETC.).

Optional information

Although the following information is not required for certification, it is useful to NH&ESP to possibly better protect the vernal pool, its habitat and species.

Property owner

IT IS STRONGLY RECOMMENDED THAT LANDOWNER PERMISSION BE OBTAINED PRIOR TO COLLECTING CERTIFICATION DOCUMENTATION.

Name

DCR

Address

North Street

Robinson State Park

Town

Agawam

State

MA

ZIP

01001

Rare wetland species

☒ Y ☐ N

WERE ANY RARE STATE-LISTED SPECIES OBSERVED USING THIS POOL?

☒ Y ☐ N

IS A PHOTOGRAPH OF THE RARE SPECIES INCLUDED WITH THIS FILING?

Description of pool and surroundings

DIMENSIONS: APPROXIMATE LENGTH

260'

APPROXIMATE WIDTH

66'

APPROXIMATE DEPTH

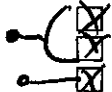
DESCRIBE DISTINCTIVE FEATURES (ROADS, STRUCTURES, BOULDERS, ETC.) WHICH ARE VISIBLE FROM OR NEAR THE POOL.

Small pool along side of road in park

ARE THERE OTHER DISTINCTIVE FEATURES ABOUT THIS POOL (VEGETATION TYPES, ABANDONED VEHICLES, FOOT TRAILS, ETC.) THAT WOULD HELP SOMEONE RECOGNIZE IT?

4. Photographs

MUST BE LABELED, DATED, AND SIGNED.



☒ POOL HOLDING WATER

☒ OBLIGATE +/-OR FACULTATIVE SPECIES

☒ DRY POOL (REQUIRED FOR EVIDENCE 3C)

5 Maps submitted



USGS TOPOGRAPHIC MAP (REQUIRED)

AND ONE OR MORE OF THE FOLLOWING:



AERIAL PHOTOGRAPH



DISTANCES/COMPASS DIRECTIONS



PROFESSIONAL SURVEY



LARGE SCALE TOPO



OTHER

OPTIONAL EXTRA INFORMATION



SKETCH MAP OF AREA



ASSESSOR'S MAP



GPS LONGITUDE/LATITUDE COORDINATES

6. Observer information & signature

Name

David Paulson

Address

Holdsvarth Hall

Holdsvarth Way (UMASS)

Town

Amherst

State

MA

ZIP

01003

Telephone

1-508-813-8725

e-mail

D.PAULSON@ACAD.UMASS.EDU

I hereby certify under the pains and penalties of perjury that the information contained in this report is true and complete to the best of my knowledge.

David Paulson

SEND COMPLETED FORM AND SUPPORTING DOCUMENTATION TO:

NH&ESP
VERNAL POOL CERTIFICATION
MA DIVISION OF FISHERIES & WILDLIFE
Route 135
WESTBOROUGH, MA 01581

All submissions and supporting documents will be retained by the Natural Heritage & Endangered Species Program. Information submitted on this form and other documents is part of the public record and is available to interested parties under the State Documents



Natural Heritage & Endangered Species Program Massachusetts Division of Fisheries and Wildlife Vernal Pool Field Observation Form

(7/99)

(For use with Guidelines for Certification of Vernal Pool Habitat)

For office use only.

1. Pool location

Town Agawam County Hampden
USGS Quadrangle name N 42.10550 ☐ SERIES 7.5' X 7.5'
W 072.68722 ☐ SERIES 7.5' X 15'

WRITTEN DIRECTIONS TO POOL:

By "pavilion/stone building",
north of the natural gas line.
Large shallow pool.

THIS INFORMATION
MUST BE SUBMITTED

GPS format: hddp.dddd
Robinson State Park

(USE ADDITIONAL PAGES, IF NECESSARY.)

Instructions

FOR COMPLETE INFORMATION ABOUT CERTIFICATION, REFER TO GUIDELINES FOR CERTIFICATION OF VERNAL POOL HABITAT.

PROVIDE ALL OF THE INFORMATION REQUESTED IN BOXES 1-8. IF MORE SPACE IS REQUIRED, ATTACH ADDITIONAL PAGES. INCLUDE ALL REQUIRED PHOTOGRAPHS AND DOCUMENTATION. SIGN THE FORM IN THE AREA PROVIDED ON THE REVERSE SIDE. INCOMPLETE OR UNSIGNED SUBMISSIONS WILL BE RETURNED.

THE FOLLOWING INSTRUCTIONS REFER TO EACH OF THE NUMBERED BOXES.

1. THE 7.5 X 7.5 SERIES HAS THE LEGEND "7.5 MINUTE SERIES" IN THE UPPER RIGHT HAND CORNER ALONG WITH THE QUADRANGLE NAME. THE 7.5 X 15 MINUTE SERIES IS SO LABELED IN THE UPPER RIGHT HAND CORNER AND HAS THE QUADRANGLE NAME IN THE LOWER RIGHT CORNER.

WRITTEN DIRECTIONS MUST BE INCLUDED.

2. INDICATE THE FIRST AND LAST DATES THAT THE POOL OR ITS BIOLOGICAL COMPONENTS WERE OBSERVED.

3. PART A AND B ARE FOR CERTIFICATION BY OBLIGATE SPECIES. PART C IS EITHER FOR ADDITIONAL INFORMATION (APPRECIATED) OR FOR CERTIFICATION BY THE FACULTATIVE SPECIES. IF CERTIFYING BY OBLIGATE SPECIES, PROVIDE A PHOTOGRAPH OF THE POOL HOLDING WATER AND AT LEAST ONE PHOTOGRAPH (OR AUDIO TAPE FOR CHORUSING) OF BREEDING ACTIVITY.

FOR CERTIFICATION BY FACULTATIVE SPECIES, PROVIDE PHOTOGRAPHS OF THE POOL HOLDING WATER AND PHOTOGRAPHS (OR TAPES) OF THE FACULTATIVE SPECIES AS REQUIRED. ADDITIONALLY, PROVIDE A PHOTOGRAPH OF THE POOL WHEN DRY OR OTHERWISE PROVE THAT IT HAS NO FISH.

2. Observation dates

First date pool/species observed 4/24/07

Last date pool observed 10/9/07 Last date species observed 4/24/07

3 A. Evidence: obligate amphibians

Indicate date of observation.

* = RARE SPECIES	COURTING ADULTS	SPERMATOPHORES	EGG MASSES	SALAMANDER LARVAE	TRANSFORMING JUVENILES
SPOTTED SALAMANDER					
* BLUE-SPOTTED SALAMANDER					
* JEFFERSON SALAMANDER					
* MARBLED SALAMANDER					
UNIDENTIFIED MOLE SALAMANDER					
	BREEDING CHORUS	MATED PAIRS	EGG MASSES	FROG TADPOLES	TRANSFORMING JUVENILES
WOOD FROG			62+ 4/24		
* SPADEFOOT TOAD					

3 B. Evidence: fairy shrimp

DATE OBSERVED _____

3 C. Evidence: facultative organisms

Indicate date of observation.

* = RARE SPECIES	DATE OBSERVED	ACTIVITY OBSERVED		DATE OBSERVED	ACTIVITY OBSERVED
BREEDING SPRING PEEPERS			PAINTED TURTLES		
BREEDING GRAY TREEFROGS			SNAPPING TURTLES		
BREEDING GREEN FROGS			PREDACEOUS DIVING BEETLE LARVAE		
BREEDING LEOPARD FROGS			WATER SCORPIONS		
BREEDING PICKERAL FROGS			DRAGONFLY NYMPHS		
BREEDING AMERICAN TOADS			DAMSELFLY NYMPHS		
BREEDING FOWLER'S TOADS			DOBSONFLY LARVAE		
* BREEDING FOUR-TOED SALAMANDERS			WHIRLIGIG BEETLE LARVAE		
RED-SPOTTED NEWT (ADULTS)			CADDISFLY LARVAE		
* SPOTTED TURTLES			LEECHES		

Instructions (continued)

4. INDICATE THE PHOTOGRAPHS BEING SUBMITTED. LABEL, DATE, AND SIGN ALL PHOTOS.

5. MARK THE POOL CLEARLY ON ALL MAPS. THE POOL MUST BE CLEARLY DISTINGUISHED FROM OTHER WETLANDS AND BE RELOCATEABLE BY OTHERS. PROVIDE ANY MAPS THAT WOULD HELP SOMEONE UNFAMILIAR WITH THE AREA LOCATE THE VERNAL POOL IN THE FIELD.

6. THE FORM MUST BE SIGNED. UNSIGNED SUBMISSIONS WILL BE RETURNED WITHOUT FURTHER ACTION.

OPTIONAL INFORMATION:

PROPERTY OWNER. PROVIDE INFORMATION ABOUT PROPERTY OWNER(S), IF KNOWN. IT IS RECOMMENDED THAT YOU SEEK PROPERTY OWNER PERMISSION PRIOR TO CERTIFICATION ACTIVITIES.

RARE SPECIES. A PHOTOGRAPH IS NECESSARY FOR DOCUMENTATION OF RARE SPECIES HABITAT.

DESCRIPTION. PROVIDE ANY INFORMATION THAT WILL DISTINGUISH THE POOL FROM OTHER WETLANDS (BOULDERS, DEBRIS, TREE SPECIES, ETC.).

Optional information

Although the following information is not required for certification, it is useful to NH&ESP to possibly better protect the vernal pool, its habitat and species.

Property owner

IT IS STRONGLY RECOMMENDED THAT LANDOWNER PERMISSION BE OBTAINED PRIOR TO COLLECTING CERTIFICATION DOCUMENTATION.

Name DCR

Address North Street
Robinson State Park

Town Agawam State MA ZIP 01001

Rare wetland species

☒ WERE ANY RARE STATE-LISTED SPECIES OBSERVED USING THIS POOL?

☐ IS A PHOTOGRAPH OF THE RARE SPECIES INCLUDED WITH THIS FILING?

Description of pool and surroundings

DIMENSIONS: APPROXIMATE LENGTH 450' APPROXIMATE WIDTH 85'
APPROXIMATE DEPTH less 1/2 m

DESCRIBE DISTINCTIVE FEATURES (ROADS, STRUCTURES, BOULDERS, ETC.) WHICH ARE VISIBLE FROM OR NEAR THE POOL.

Large shallow pool
80% coverage by red maple canopy
Trees 6-18" dbh

ARE THERE OTHER DISTINCTIVE FEATURES ABOUT THIS POOL (VEGETATION TYPES, ABANDONED VEHICLES, FOOT TRAILS, ETC.) THAT WOULD HELP SOMEONE RECOGNIZE IT?

4. Photographs

MUST BE LABELED, DATED, AND SIGNED.

- ☒ POOL HOLDING WATER
- ☒ OBLIGATE +/-OR FACULTATIVE SPECIES
- ☒ DRY POOL (REQUIRED FOR EVIDENCE 3C)

5 Maps submitted

☒ USGS TOPOGRAPHIC MAP (REQUIRED)

AND ONE OR MORE OF THE FOLLOWING:

- ☒ AERIAL PHOTOGRAPH
- ☐ DISTANCES/COMPASS DIRECTIONS
- ☐ PROFESSIONAL SURVEY
- ☐ LARGE SCALE TOPO
- ☐ OTHER _____

OPTIONAL EXTRA INFORMATION

- ☒ SKETCH MAP OF AREA
- ☐ ASSESSOR'S MAP
- ☒ GPS LONGITUDE/LATITUDE COORDINATES

6. Observer information & signature

Name David Paulsen

Address Holdsworth Hall

Holdsworth Way (UMASS)

Town Amherst State MA ZIP 01003

Telephone 1-508-813-8725

e-mail DPAULSON@ACAD.UMASS.EDU

I hereby certify under the pains and penalties of perjury that the information contained in this report is true and complete to the best of my knowledge.

David Paulsen

SEND COMPLETED FORM AND SUPPORTING DOCUMENTATION TO:

NH&ESP
VERNAL POOL CERTIFICATION
MA DIVISION OF FISHERIES & WILDLIFE
Route 135
WESTBOROUGH, MA 01581

All submissions and supporting documents will be retained by the Natural Heritage & Endangered Species Program. Information submitted on this form and other documents is part of the public record and is available to interested parties under the State Documents



Natural Heritage & Endangered Species Program Massachusetts Division of Fisheries and Wildlife Vernal Pool Field Observation Form

(7/99)

(For use with *Guidelines for Certification of Vernal Pool Habitat*)

For office use only.

1. Pool location "Pool 1"

Town Agawam County Hampden

USGS Quadrangle name N 42.08162 ☐ SERIES 7.5' X 7.5'
W 072.67085 ☐ SERIES 7.5' X 15'

WRITTEN DIRECTIONS TO POOL: Robinson State Park

THIS INFORMATION
MUST BE SUBMITTED

Long narrow pool along fire road
Cright-hand side

GPS format: hddd.ddddd

(USE ADDITIONAL PAGES, IF NECESSARY.)

Instructions

FOR COMPLETE INFORMATION ABOUT CERTIFICATION, REFER TO *GUIDELINES FOR CERTIFICATION OF VERNAL POOL HABITAT*.

PROVIDE ALL OF THE INFORMATION REQUESTED IN BOXES 1-6. IF MORE SPACE IS REQUIRED, ATTACH ADDITIONAL PAGES. INCLUDE ALL REQUIRED PHOTOGRAPHS AND DOCUMENTATION. SIGN THE FORM IN THE AREA PROVIDED ON THE REVERSE SIDE. INCOMPLETE OR UNSIGNED SUBMISSIONS WILL BE RETURNED.

THE FOLLOWING INSTRUCTIONS REFER TO EACH OF THE NUMBERED BOXES.

1. THE 7.5 X 7.5 SERIES HAS THE LEGEND "7.5 MINUTE SERIES" IN THE UPPER RIGHT HAND CORNER ALONG WITH THE QUADRANGLE NAME. THE 7.5 X 15 MINUTE SERIES IS SO LABELED IN THE UPPER RIGHT HAND CORNER AND HAS THE QUADRANGLE NAME IN THE LOWER RIGHT CORNER.

WRITTEN DIRECTIONS MUST BE INCLUDED.

2. INDICATE THE FIRST AND LAST DATES THAT THE POOL OR ITS BIOLOGICAL COMPONENTS WERE OBSERVED.

3. PART A AND B ARE FOR CERTIFICATION BY OBLIGATE SPECIES. PART C IS EITHER FOR ADDITIONAL INFORMATION (APPRECIATED) OR FOR CERTIFICATION BY THE FACULTATIVE SPECIES. IF CERTIFYING BY OBLIGATE SPECIES, PROVIDE A PHOTOGRAPH OF THE POOL HOLDING WATER AND AT LEAST ONE PHOTOGRAPH (OR AUDIO TAPE FOR CHORUSING) OF BREEDING ACTIVITY.

FOR CERTIFICATION BY FACULTATIVE SPECIES, PROVIDE PHOTOGRAPHS OF THE POOL HOLDING WATER AND PHOTOGRAPHS (OR TAPES) OF THE FACULTATIVE SPECIES AS REQUIRED. ADDITIONALLY, PROVIDE A PHOTOGRAPH OF THE POOL WHEN DRY OR OTHERWISE PROVE THAT IT HAS NO FISH.

2. Observation dates

First date pool/species observed 4/24/2007

Last date pool observed 10/9/07 Last date species observed 4/24/2007

3 A. Evidence: obligate amphibians

Indicate date of observation.

* = RARE SPECIES	COURTING ADULTS	SPERMATOPHORES	EGG MASSES	SALAMANDER LARVAE	TRANSFORMING JUVENILES
SPOTTED SALAMANDER			<u>2/24</u>		
* BLUE-SPOTTED SALAMANDER					
* JEFFERSON SALAMANDER					
* MARBLED SALAMANDER					
UNIDENTIFIED MOLE SALAMANDER					
	BREEDING CHORUS	MATED PAIRS	EGG MASSES	FROG TADPOLES	TRANSFORMING JUVENILES
WOOD FROG			<u>TNTC 4/24</u>		
* SPADEFOOT TOAD					

3 B. Evidence: fairy shrimp

DATE OBSERVED _____

3 C. Evidence: facultative organisms

Indicate date of observation.

* = RARE SPECIES	DATE OBSERVED	ACTIVITY OBSERVED
BREEDING SPRING PEEPERS	<u>4/24</u>	<u>Present in pool</u>
BREEDING GRAY TREEFROGS		
BREEDING GREEN FROGS	<u>4/24</u>	<u>Present in pool</u>
BREEDING LEOPARD FROGS		
BREEDING PICKEREL FROGS		
BREEDING AMERICAN TOADS		
BREEDING FOWLER'S TOADS		
* BREEDING FOUR-TOED SALAMANDERS		
RED-SPOTTED NEWT (ADULTS)		
* SPOTTED TURTLES		

	DATE OBSERVED	ACTIVITY OBSERVED
PAINTED TURTLES		
SNAPPING TURTLES		
PREDACEOUS DIVING BEETLE LARVAE		
WATER SCORPIONS		
DRAGONFLY NYMPHS		
DAMSELFLY NYMPHS		
DOBSONFLY LARVAE		
WHIRLIGIG BEETLE LARVAE		
CADDISFLY LARVAE		
LEECHES		

Instructions (continued)

4. INDICATE THE PHOTOGRAPHS BEING SUBMITTED. LABEL, DATE, AND SIGN ALL PHOTOS.

5. MARK THE POOL CLEARLY ON ALL MAPS. THE POOL MUST BE CLEARLY DISTINGUISHED FROM OTHER WETLANDS AND BE RELOCATEABLE BY OTHERS. PROVIDE ANY MAPS THAT WOULD HELP SOMEONE UNFAMILIAR WITH THE AREA LOCATE THE VERNAL POOL IN THE FIELD.

6. THE FORM MUST BE SIGNED. UNSIGNED SUBMISSIONS WILL BE RETURNED WITHOUT FURTHER ACTION.

OPTIONAL INFORMATION:

PROPERTY OWNER. PROVIDE INFORMATION ABOUT PROPERTY OWNER(S), IF KNOWN. IT IS RECOMMENDED THAT YOU SEEK PROPERTY OWNER PERMISSION PRIOR TO CERTIFICATION ACTIVITIES.

RARE SPECIES. A PHOTOGRAPH IS NECESSARY FOR DOCUMENTATION OF RARE SPECIES HABITAT.

DESCRIPTION. PROVIDE ANY INFORMATION THAT WILL DISTINGUISH THE POOL FROM OTHER WETLANDS (BOULDERS, DEBRIS, TREE SPECIES, ETC.).

Optional information

Although the following information is not required for certification, it is useful to NHESP to possibly better protect the vernal pool, its habitat and species.

Property owner

IT IS STRONGLY RECOMMENDED THAT LANDOWNER PERMISSION BE OBTAINED PRIOR TO COLLECTING CERTIFICATION DOCUMENTATION.

Name Department of Conservation + Rec.

Address North Street

Robinson State Park

Town Agawam State MA ZIP 01001

Rare wetland species

☒ ☐ WERE ANY RARE STATE-LISTED SPECIES OBSERVED USING THIS POOL?

☒ ☐ IS A PHOTOGRAPH OF THE RARE SPECIES INCLUDED WITH THIS FILING?

Description of pool and surroundings

DIMENSIONS: APPROXIMATE LENGTH 258' APPROXIMATE WIDTH 63'

APPROXIMATE DEPTH

DESCRIBE DISTINCTIVE FEATURES (ROADS, STRUCTURES, BOULDERS, ETC.) WHICH ARE VISIBLE FROM OR NEAR THE POOL.

Long-narrow pool along fire road

ARE THERE OTHER DISTINCTIVE FEATURES ABOUT THIS POOL (VEGETATION TYPES, ABANDONED VEHICLES, FOOT TRAILS, ETC.) THAT WOULD HELP SOMEONE RECOGNIZE IT?

4. Photographs

MUST BE LABELED, DATED, AND SIGNED.



POOL HOLDING WATER

OBLIGATE +/-OR FACULTATIVE SPECIES

DRY POOL (REQUIRED FOR EVIDENCE 3C)

5. Maps submitted

☒ USGS TOPOGRAPHIC MAP (REQUIRED)

AND ONE OR MORE OF THE FOLLOWING:

- ☒ AERIAL PHOTOGRAPH
- ☐ DISTANCES/COMPASS DIRECTIONS
- ☐ PROFESSIONAL SURVEY
- ☐ LARGE SCALE TOPO
- ☐ OTHER

OPTIONAL EXTRA INFORMATION

- ☒ SKETCH MAP OF AREA
- ☐ ASSESSOR'S MAP
- ☒ GPS LONGITUDE/LATITUDE COORDINATES

See front

6. Observer information & signature

Name David Paulson

Address Holdsworth Hall

Holdsworth Way (UMASS)

Town Amherst State MA ZIP 01003

Telephone 1-508-813-8725

e-mail DPAULSON@ACAD.UMASS.EDU

I hereby certify under the pains and penalties of perjury that the information contained in this report is true and complete to the best of my knowledge.

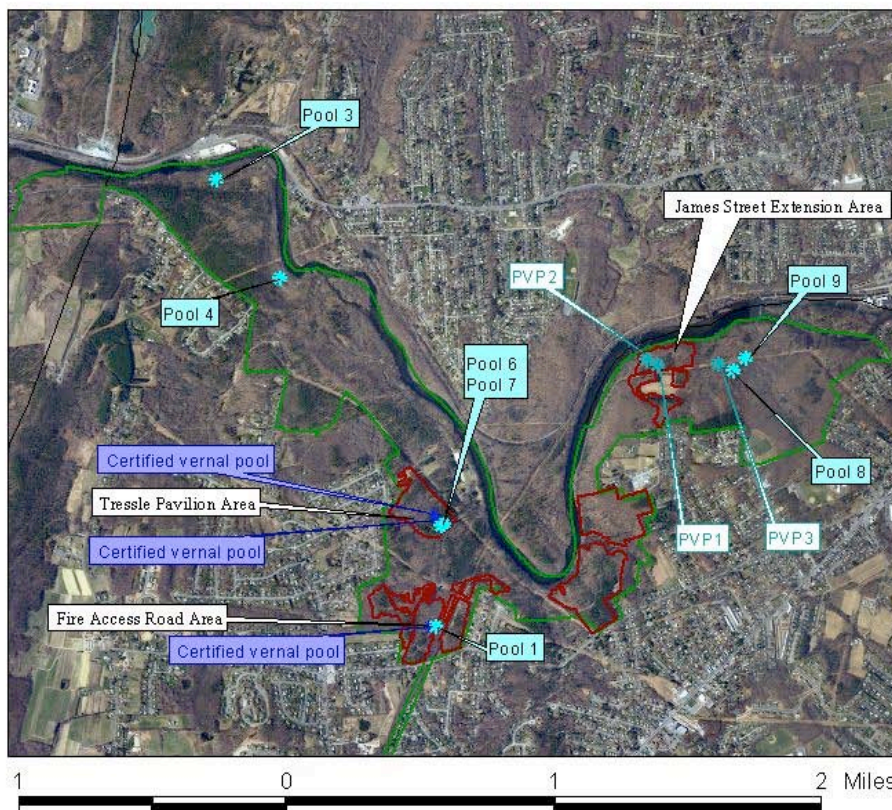
David Paulson

SEND COMPLETED FORM AND SUPPORTING DOCUMENTATION TO:

NH&ESP
VERNAL POOL CERTIFICATION
MA DIVISION OF FISHERIES & WILDLIFE
ROUTE 135
WESTBOROUGH, MA 01581

All submissions and supporting documents will be retained by the Natural Heritage & Endangered Species Program. Information submitted on this form and other documents is part of the public record and is available to interested parties under the State Documents

Robinson State Park Vernal Pools



- ★ Certifiable Vernal Pools 2007
- ★ Possible Vernal Pools for revisit
- ★ Certified Vernal Pools, Robinson
- Original Timber Sale areas
- Robinson State Park Boundary
- Town boundaries

Data: NHESP , DCR, and MassGIS
 Background:
 MassGIS 2005 Orthophoto
 Map Created: March 6, 2008



Division of Fisheries & Wildlife

Wayne F. MacCallum, *Director*

Guidelines for the Certification of Vernal Pool Habitat

Vernal Pool Fact Sheet

WHAT ARE VERNAL POOLS?

Vernal pools are temporary bodies of fresh water that provide critical habitat for many vertebrate and invertebrate wildlife species. "Vernal" means spring, and indeed, many vernal pools are filled by spring rains and snowmelt, only to dry up during the hot, dry months of summer. However, many vernal pools are filled by the rains of autumn and may persist throughout the winter. Vernal pools are quite often very small and shallow; vernal pools that support rich communities of vertebrate and invertebrate animals may measure only a few yards across. However, vernal pools of several acres occur throughout Massachusetts.

WHERE ARE VERNAL POOLS FOUND?

Vernal pools are common in Massachusetts, occurring in every town in the state. Vernal pools are found across the landscape where small woodland depressions, swales or kettle holes collect spring runoff or intercept seasonally high groundwater tables. Although many people associate vernal pools only with dry woodland areas, vernal pools also occur in meadows, river floodplains, interdunal swales, and large vegetated wetland complexes. Vernal pool habitat occurs wherever water is contained for more than 2 months in the spring and summer of most years and where no fish are present.

WHY ARE VERNAL POOLS VALUABLE?

Vernal pools constitute a unique and increasingly vulnerable type of wetland. Vernal pools are inhabited by many species of wildlife, some of which are totally dependent on vernal pools for their survival. Vernal pools do not support fish because they dry out annually or at least periodically. Some may contain water year round, but are free of fish as a result of significant drawdowns that result in extremely low dissolved oxygen levels. The wood frog (*Rana sylvatica*) and the four local species of mole salamander (*Ambystoma* spp.) have evolved breeding strategies intolerant of fish predation on their eggs and larvae; the lack of

Some state-listed species that may be found in vernal pools

Species	Status ¹
Blue-spotted salamander (<i>Ambystoma laterale</i>) ²	SC
Jefferson salamander (<i>Ambystoma jeffersonianum</i>) ²	SC
Marbled salamander (<i>Ambystoma opacum</i>) ²	T
Four-toed salamander (<i>Hemidactylium scutatum</i>) ³	SC
Eastern spadefoot toad (<i>Scaphiopus holbrookii</i>) ²	T
Spotted turtle (<i>Clemmys guttata</i>) ³	SC
Wood turtle (<i>Clemmys insculpta</i>) ³	SC
Blanding's turtle (<i>Emydoidea blandingii</i>) ²	T

¹ Status pursuant to the MA Endangered Species Act - T: Threatened; SC: Special Concern

² Obligate species require vernal pool habitat to successfully breed

³ Facultative species may use vernal pools but do not require them

fish populations is essential to the breeding success of these species. Other amphibian species, including the American toad (*Bufo americanus*), green frog (*Rana clamitans*), and the red-spotted newt (*Notophthalmus viridescens*), often exploit the fish-free waters of vernal pools but do not depend on them. Vernal pools also support rich and diverse invertebrate faunas. Some invertebrate species, such as fairy shrimp (*Eubbranchipus* spp.), are also entirely dependent upon vernal pool habitat. Invertebrates are both important predators and prey in vernal pool ecosystems. Vernal pools are an important habitat resource for many birds, mammals, reptiles and amphibians, including many state-listed rare species.

VERNAL POOL PROTECTION

The Massachusetts Wetlands Protection Act Regulations (310 CMR 10.00), the Massachusetts Surface Water Quality Standards (314 CMR 4.00) used to administer section 401 of the federal Clean Water Act, the Massachusetts Environmental Code: Title 5, and the Forest Cutting Practices Act regulations all provide protection to vernal pools that have been officially certified. The regulations for both the Wetlands Protection Act and Forest Cutting Practices Act also provide protection to vernal pools that have not been certified if their occurrence is adequately documented during permit review. Protection under any of these laws requires the following:

- 1) the vernal pool occurs in an area subject to the jurisdiction of the regulations; and
- 2) the activities proposed are regulated.

The Massachusetts Wetlands Protection Act regulations (310 CMR 10.00) protect certified vernal pools and *up to* 100 feet beyond the boundary of the pool (referred to as the “vernal pool habitat”), by preventing alterations which would result in the reduction of the wildlife habitat value of the certified vernal pool. A certified vernal pool is not automatically protected by these regulations, though. Certified vernal pools must occur within a resource area that comes under the jurisdiction of the Act before they receive protection. Similarly, the 100 feet around the vernal pool does not extend into non-jurisdictional upland or the buffer zone of a resource area. Though the regulations specify performance standards for vernal pools that are located in Bordering or Isolated Land Subject to Flooding (BLSF and ILSF respectively), vernal pools that occur within any wetland resource area are protected for their wildlife habitat value under the Wetlands Protection Act. Performance standards may be applied by a conservation commission to protect vernal pools that occur in any jurisdictional wetland resource area.

Vernal pools that are not certified may also be protected by a local conservation commission or the DEP if credible scientific evidence is presented up until the end of the appeals period for a Superseding Order of Conditions issued by the DEP. A conservation commission, or the DEP on appeal, can incorporate protective conditions into an Order of Conditions that would prevent the alteration of the wildlife habitat value of the pool and its 100 foot “vernal pool habitat” if they occur within a regulated wetland even though it is not certified.

Each DEP Regional Office has at least one Vernal Pool Liaison who should be contacted for all questions related to the protection of both certified and uncertified vernal pools. Since regulatory authority rests with the Department, they are best able to answer questions about what may or may not happen in or around vernal pools. Your regional liaison may be reached at the following addresses:

Northeast Regional Office
Wayne Lozzi
203-A Lowell Street
Wilmington, MA 01887
(978) 661-7600

Southeast Regional Office
Daniel Gilmore
20 Riverside Drive
Lakeville, MA 02347
(508) 946-2700

Central Regional Office
Marielle Stone
627 Main Street
Worcester, MA 01608
(508) 792-7650

Western Regional Office
Karen Hirschburg
State House West, 4th Floor
Springfield, MA 01103
(413) 748-1100

The Massachusetts Surface Water Quality Standards (314 CMR 4.00) administer Section 401 of the federal Clean Water Act and protect certified vernal pools. Under these regulations, any certified vernal pool is classified as an Outstanding Resource Water (ORW). The regulations, administered by the DEP, strictly prohibit discharges of solid or liquid fill within certified vernal pools. Storm drainage from roads and rooftops as well as solid fill are prohibited within the boundaries of the pool. As is the case with the Wetlands Protection Act however, the certified vernal pool as well as the proposed activity must be within the jurisdiction of these regulations - the state's Clean Water Act - before it receives this protection.

The Massachusetts Environmental Title 5 (310 CMR 15.000) regulates the siting and construction of subsurface sewage disposal (septic) systems in the state. A system's septic tank and distribution box must be located a minimum of 50 feet, and the leaching field a minimum of 100 feet, from the boundary of a certified vernal pool.

The Massachusetts Forest Cutting Practices Act Regulations (3.04 CMR 11.00) protect certified vernal pools from certain forestry impacts. Harvesting requirements limit cutting to no more than 50% of the trees within 50 feet of a certified vernal pool. They also require that trees or tree tops not be felled in certified vernal pools, and restrict the use of pools as staging areas or skidder trails. Guidelines, similar to the regulations, are established for activities planned near uncertified vernal pools identified by consulting foresters.

THE VERNAL POOL BOUNDARY

The extreme edges of vernal pool habitat represent one of the most ecologically valuable portions of these habitats. Shallow water at the edge of a pool is generally the first to thaw in the spring. This provides early access to the pool for the earliest breeding species. The shallow water zones also tend to be significantly warmer than the deeper portions of a vernal pool throughout the spring. Egg masses of early breeding amphibians benefit from the warmer water temperatures at the pool edges that promote rapid egg development.

The boundary of vernal pool habitat must incorporate the shallowest reaches of the pool. Where there is no distinct and clear topographic break at the edge of a pool, the maximum observed or recorded water level represents the ecological boundary of the vernal pool. This boundary is evident and should be delineated by leaf staining and other indicators of hydrology outside of the peak-flood stage of early spring (March through early April in most cases).

PLEASE NOTE The boundary of vernal pool habitat may be defined differently for the purpose of state or federal protection.

The physical, on-the-ground, boundary of a certified vernal pool is not established when a certification number is issued. Field observations of maximum flood levels, or of indicators of the maximum water level, must be made to determine the boundary. The boundary must be established based on field observation of water level indicators. The NHESP, in certifying a vernal pool, does not visit the pool, and as such does not establish the actual boundary through the certification process. Therefore, in recording observations of vernal pools for the purpose of certification, notes pertaining to observed water level and recognizable landmarks that show maximum flooding are extremely helpful in boundary delineation.

The Wetlands Protection Act regulations allows a project proponent to submit an opinion as to the extent of a certified vernal pool that is based upon a theoretical one year storm of a total of 2.7 inches of water in 24 hours. If an opinion based on this theoretical storm event is to be submitted, it should also include ground water that the basin is holding at the beginning of the spring amphibian breeding season. Calculations without groundwater inputs will under-represent the true size of the vernal pool. The DEP has stated in its program policies that ground water inputs should not be ignored in these calculations because it will result in a total volume that may be considerably smaller than the basin holds in any given spring.

HOW CAN VERNAL POOLS BE CERTIFIED?

The Massachusetts Natural Heritage & Endangered Species Program administers the official vernal pool certification program. The certification program depends entirely on volunteer effort and the initiative of interested individuals and organizations. Interested parties should locate potential vernal pools and then:

1. Contact the Massachusetts Natural Heritage & Endangered Species Program [(508) 792-7270, ext. 200 or www.state.ma.us/dfwele/dfw/nhesp/heritage.htm] to obtain the official *Guidelines for the Certification of Vernal Pool Habitat*, along with Vernal Pool Field Observation Forms;

Certification is based on proof that a confined basin depression provides important wildlife habitat consistent with the vernal pool certification criteria in the *Guidelines*. Animals that use vernal pools at some point in their life cycle are generally divided into two groups:

Obligate Species: those vertebrate and invertebrate species that rely on vernal pools for all or a portion of their life cycle and are unable to successfully complete their life cycle without vernal pools

Facultative Species: those vertebrate and invertebrate species that can use vernal pool habitat for all or a portion of their life cycle, but are able to successfully complete their life cycle in other water bodies

Obligate species serve as *direct* indicators of vernal pool habitat because they require at least two months of flooded conditions and the absence of established fish populations. When breeding evidence of obligate species is documented, it is not necessary to prove that an established, reproducing fish population does not exist.

Facultative species serve as *indirect* indicators of vernal pool habitat. Therefore, if only facultative species are observed, evidence that there is no reproducing fish population must also be submitted for certification.

2. Fill out and submit a Field Observation Form along with photographic documentation of the physical and biological criteria required by the *Guidelines* and required maps to the NHESP for review. Photographs (slides or prints) are the preferred type of documentation of the biological certification criteria observed in a vernal pool. The most easily photographed evidence of vernal pool indicator species is egg masses of wood frogs and mole salamanders. These are conspicuous in the early spring and easily distinguished from other amphibian eggs. See the *Guidelines* for details.

Following receipt of certification materials, the Natural Heritage & Endangered Species Program assesses the completeness and accuracy of the information and documentation submitted. The NHESP does not field visit pools prior to certification but relies on the presentation of accurate and clear documentation.

After it is determined that a vernal pool meets the physical and biological criteria established in the *Guidelines*, it will be officially certified by the NHESP. The observer, local conservation commission, regional office of the Department of Environmental Protection and the landowner are notified of the certification. The locations of certified vernal pools are plotted on the NHESP's "Estimated Habitats of Rare Wetlands Wildlife and Certified Vernal Pools" on a biennial basis. These maps are sent to the town clerk and to the conservation commission, and are available for viewing by the public. The NHESP also produces a statewide Atlas of these maps, reproduced at a reduced scale, which is available at cost. The certified vernal pool datalayer is also available in digital format through the MassGIS office.